

DRAFT LHC-DFBX FABRICATION CHANGE CONTROL PROCEDURE

The LHC-DFBX Procurement Change Control Procedures is a supplemental document to The LBNL LHC QA Plan No. LBNL/PUB-5478-Rev. B.

1.0 LBNL GENERATED DESIGN/FABRICATION CHANGE PROCEDURE (FLOW CHART NO. 1)

1.1 SCREENING AND REQUEST FOR CHANGE

The project team member requesting a change uses the attached DCN form. The form includes information on the requested change and a preliminary assessment of impact. The changes may impact components being fabricated in LBNL facilities or at outside vendors. The form is submitted to the Project Engineer for review and approval. The Project Engineer will review the request and assess the impact on other subsystems within the US-LHC project. The Project Engineer will communicate the requested changes to the vendor via the Request for Information Form (RFI) and to LBNL Procurement Specialist if it results in changes to procurement cost or schedule.

1.2 REVIEW OF DCN

The DCN is assigned a number by the Project Engineer. The receiver of the request makes a preliminary review of the DCN. The receiver of the request may approve the request or may involve an ad hoc change control board review in the approval process. See following Guidelines Table for details. Such a review can be done informally and documented, for example, via e-mail. The result of the review shall result in a completed DCN form.

1.3 REPORTING AND FOLLOW-UP OF APPROVED DCN

The DCN is returned to the requester with approval or rejection indicated. If the DCN is approved, the form will be distributed to all project members at LBNL and FNAL. If the DCN results in changes to components being fabricated at outside vendors, copies are sent to the LBNL Procurement Office. The recipients are encouraged to further distribute the DCN. The Project Engineer is responsible to ensure that affected documents are updated to reflect the approved changes.

1.4 RECORDS

A copy of the DCN (either approved or rejected) is sent to Project Engineer for record retention.

2.0 SUBCONTRACTOR GENERATED CHANGES FLOW (CHARTS NOS. 2 AND 3)

DFBX components and systems fabricator under subcontract to LBNL may generate their own design requests during the fabrication and assembly phase. These requests could be to correct design problems or address or to simplify assembly and tests process. The Subcontractors are issued project change forms to communicate the change requests. Technical communication shall be conducted between the LBNL Project Engineer and the Subcontractor's Project Manager. The threshold for completing such forms is \$1000. Any changes that may result in changes to procurement cost or schedule shall be communicated by the Project Engineer to LBNL Procurement Officer via appropriate forms.

Non-Conformance reports generated by the Subcontractors shall be reviewed by the Project Engineer and or Material review Board (MRB). The MRB maybe constituted to determine the disposition of non-conforming parts/assemblies, and to institute and approve corrective or remedial action where required. The Project Engineer shall inform the LBNL Procurement Officer of any changes to procurement cost or schedule resulting from the non-conformance review.

3.0 DOCUMENT MANAGEMENT SYSTEM

DMS is used to provide control of Specifications, Engineering Notes and design drawings. A document is created and assigned a number by the DMS. The document is under control of the engineer until it is released. A released document may be revised, with appropriate notation and replacement back into the release vault in the Document Control Center. A revised released document is assigned a new version number; previous versions are retained.

Copies of completed DCN forms and all other applicable documents, specifications or drawings are managed by the Intralink PDM system and maintained by the DFBX Project Engineer.

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3.2 RECORDS

A copy of the DCN (either approved or rejected) is sent to Project Engineer for record retention.

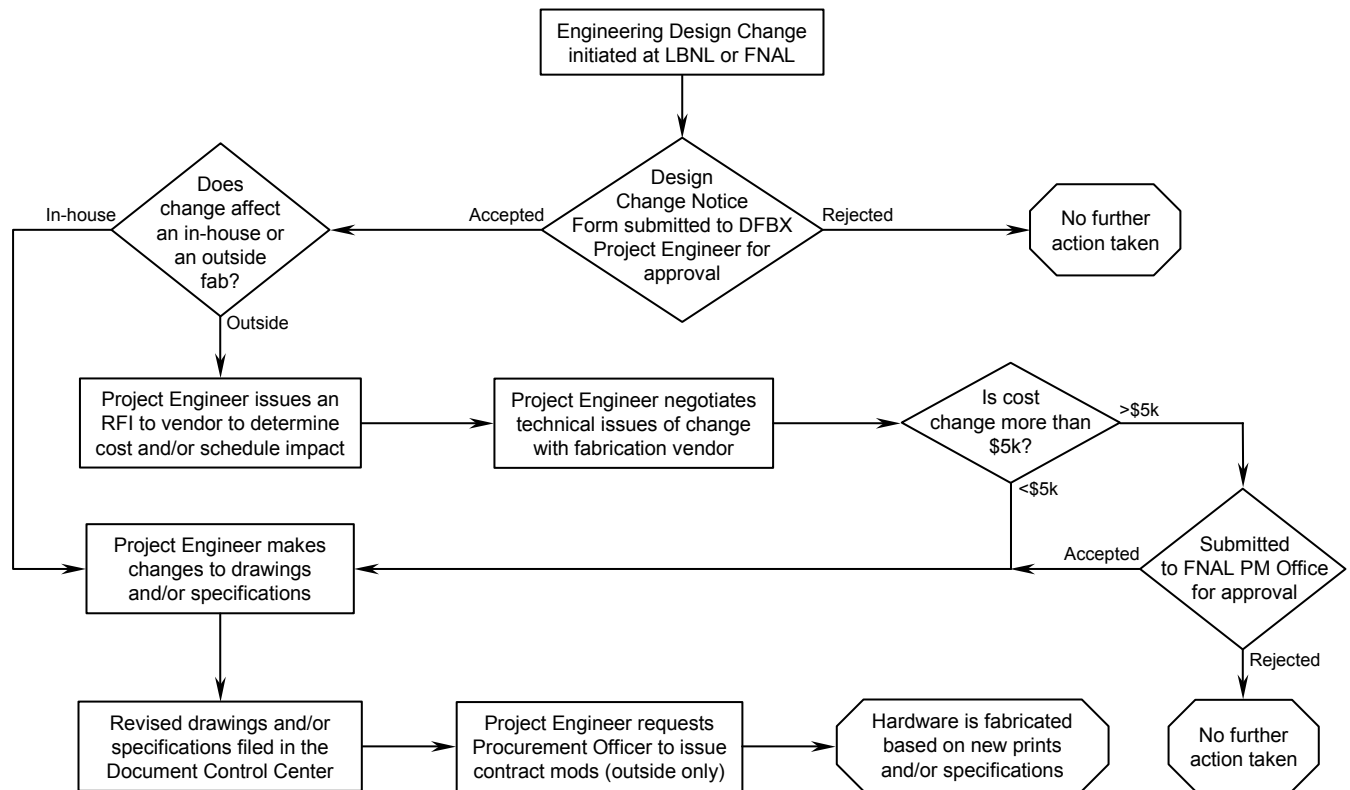
4.0 DOCUMENT MANAGEMENT SYSTEM

DMS is used to provide control of Specifications, Engineering Notes and design drawings. A document is created and assigned a number by the DMS. The document is under control of the engineer until it is released. A released document may be revised, with appropriate notation and replacement back into the release vault in the Document Control Center. A revised released document is assigned a new version number; previous versions are retained. Copies of completed DCN forms and all other applicable documents, specifications or drawings are managed by the Intralink PDM system and maintained by the DFBX Project Engineer.

Guidelines for approval of LBNL DCN

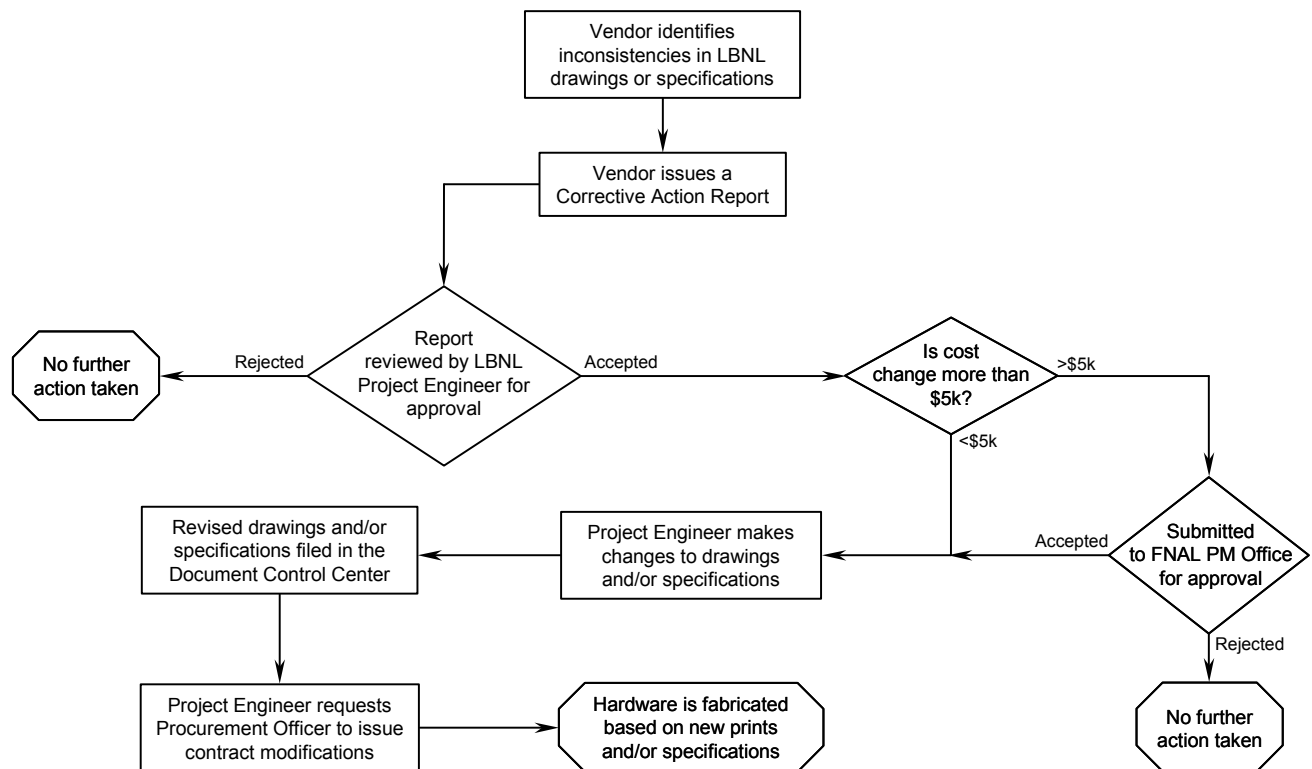
Description of Proposed Change	Approval
<ul style="list-style-type: none"> • Impacts only one subsystem and • Does not impact any interfaces with other work packages and • Does not impact technical capabilities of subsystem and • Has no schedule impact and • Does not result in budget impact for the work package. • Does not result in changes of components under procurement. 	Lead Engineer
<ul style="list-style-type: none"> • Impacts another subsystem in a minor way (e.g., flange size) and • Does not impact technical capabilities of any subsystem or overall system and • Does not significantly impact the schedule (e.g., only minor changes that can be absorbed by project schedule float) and • Does not significantly impact cost of any subsystem or overall system (<\$2K) • Results in changes of components under procurement 	Lead Engineer Project Engineer Procurement Officer
<ul style="list-style-type: none"> • Significantly impacts another subsystem (e.g., significant interface changes) and/or • Significantly impacts the technical capabilities of any subsystem or system and/or • Delays the schedule of critical path items or milestones affecting multiple laboratories by 2 weeks or more or delays the schedule of non-critical path items to the extent that they become critical path and/or • Increases the cost by >\$5K 	Project Engineer LHC-Project Management Office Procurement Officer

LBNL Generated Changes

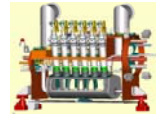


Flow Chart No. 1

Vendor Generated Changes (1)



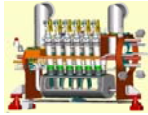
Flow Chart No. 2



DFBX Design Change Notice Form

LHC-DFBX
DCN No. DFBX-

Requester: _____ Date: _____
Affected Document: _____
Short Title of Change: _____
Description of Proposed Change:
Justification for Proposed Change:
Impact on Cost/Schedule:
Impact on other subsystems or the Interface Specifications:
Reviewed by Lead Engineer:
Reviewed by Project Engineer Concurrence:
Approval Date:
Rejection and reason for rejection:
Comments and other actions required (e.g., BAR):

Deviation RequestLHC-DFBX
PO. No.**Deviation Request****DR -**Routine ☐ Urgent ☐ Emergency ☐

Date:

To LBNL DFBX Project Manager:

Supplier Name, Address, Phone, etc:

Type: Material ☐ Part ☐ Subassembly ☐ Final Assembly ☐ Procedure ☐ Design Conflict ☐ Spec Conflict ☐

Item Name and Serial Number

DWG # or Spec #

QTY Nonconforming Items

Description of Deviation See attached ☐Requirements Violated See attached ☐

Originator

Date

Principal Supplier Planner

Date

Remedial Action/Justification See attached ☐Cause and Corrective Action See attached ☐**Prime Contractor Approvals**

Recommended Disposition

Accept ☐ Redesign ☐ Reject ☐ Repair ☐

Cost / Schedule Impact

Date

Date

LBNL ApprovalsCustomer Disposition: Accept Request ☐ Deny Request ☐ See attached ☐

Technical Representative

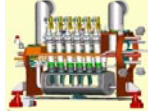
Date

LBNL DFBX Project Manager

Date

Procurement Representative

Date

Non-Conformance ReportLHC-DFBX
PO. No.**Non-Conformance Report**Routine ☐ Urgent ☐ Emergency ☐**NCR -**

Date:

To LBNL DFBX Project Manager:

Supplier Name, Address, Phone, etc:

Type: Material ☐ Part ☐ Subassembly ☐ Final Assembly ☐ Procedure ☐ Design Conflict ☐
Spec Conflict ☐

Drawing or Specification No.

Item Name and Serial Number

QTY Nonconforming Items

Description of Non-Conformance See attached ☐Requirements Violated See attached ☐

Initiator:

Date

Supplier QA Manager:

Date

Prime Contractor Approvals

Recommended Disposition

Accept ☐ Redesign ☐ Reject ☐ Repair ☐

Cost / Schedule Impact

Date

Date

LBNL ApprovalsDisposition: Accept Request ☐ Deny Request ☐ See attached ☐

Technical Representative

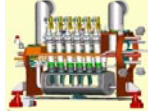
Date

LBNL DFBX Project Manager

Date

Procurement Representative

Date

Corrective Action Report (CAR)LHC-DFBX
PO. No.**Corrective Action Report**Routine ☐ Urgent ☐ Emergency ☐**CAR -**

Date:

To LBNL DFBX Project Manager:

Supplier Name, Address, Phone, etc:

Type: Material ☐ Part ☐ Subassembly ☐ Final Assembly ☐ Procedure ☐ Design Conflict ☐ Spec Conflict ☐

Drawing Number:

Specification Number:

NCR or DR Number:

Problem Description See attached ☐Requirements Violated See attached ☐

Initiator:

Date

Supplier QA Manager:

Date

Cause and Corrective Action See attached ☐**Prime Contractor Approvals**

Recommended Disposition

Accept ☐ Redesign ☐ Reject ☐ Repair ☐

Cost / Schedule Impact

Date

Date

LBNL ApprovalsDisposition: Accept Request ☐ Deny Request ☐ See attached ☐

Technical Representative

Date

DFBX Project Manager:

Date

Procurement Representative

Date

Request for Information (RFI)

LHC-DFBX RFI No.				REQUEST FOR INFORMATION	
P. O. Number:		Routine <input type="checkbox"/> (7 day) Urgent <input type="checkbox"/> (3 day) Emergency <input type="checkbox"/> (24 hour)			
RFI -					
Date:					
REQUEST FROM SUPPLIER					
To:			From:		
Reference Drawings:			Reference Specifications:		
Affected Location:					
Information Requested:					
Reason Requested:					
INFORMATION TO SUPPLIER					
To:			From:		
Requested Information: See attached <input type="checkbox"/>					
<i>This RFI shall not commit the University to any changes in the ordered items or any specifications, price(s), delivery schedule or terms, method of shipment, or other contractual requirements. Changes to the contractual requirements shall be effected only by written change order or modification issued by the LBNL procurement representative or by a designated alternate.</i>					
LBNL DFBX Project Manager				Date:	